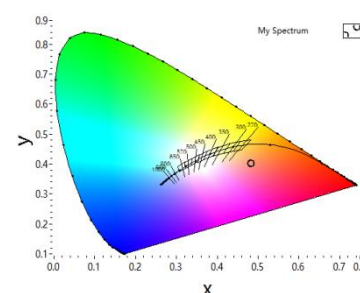


LED-Probe30-Series Product Manual

Overview:

- > A smart chromaticity probe
- > Designed for industrial field automatic measurement of LED
- > Color coordinates according to the standard of CIE1931, CIE1960, CIE1976
- > Output data format (RGB,, Lux, XYZ, xy, uv, CCT, HSL, freq, DomiWave)
- > Brightness ranges is up to one million Lux, and the resolution is up to 0.005lux
- > Auto-capturing LED flashing frequency (<50Hz)
- > High accuracy and good repeatability
- > Wide voltage work
- > Communication interface (RS485 / USB/DIO/AO)
- > OneKey learning function
- > Provide secondary development SDK, can be embedded ICT, FCT, ATE machine



Application:

- > Weak light environment test
- > OLED/LCD screen brightness test
- > Automobile air lamp test
- > Product shell logo lamp test
- > Embedded ICT / FCT / ATE machine



List of electrical optics specifications:

Type	Item	Parameter	Remark
Electrical specification	Input voltage	DC9-26V power supply	T<60℃, H<90%
	Working current	DC24V-100MA	Built-in fuse, one-way diode
	Communication Interface	RS485/MiniUSB	
	Communication protocol	8,1,None,baud(2400-921600)	ID, baud can be configured, the same as the two interface communication protocols
	Data format	RGBI, Lux, CCT, xy, u'v', dominant wavelength, Frequency etc.	CIE1931, CIE1960, CIE1976
	Cascade expansion	RS485 interface supports 64 modules in parallel	
	DIO	Optional DIO interface can be	Configure the upper and lower

		connected with PLC	limits, IO automatically output the results, offline running
	3AO	0-5V	Optional 4-20 ma
	Special function	LED flashing frequency (f <50Hz)	Replace the CCD to read the digital tube data
Software programming	Programming language	C, C++, C#, VB, labview etc.	Please contact us ask for Labview sample source code
	SDK	RS485 command table	MODBUS-ASCII protocol
	Support system	WINDOWS, LINUX, Wince etc.	Serial port instructions support any hardware and software platform
	Debugging software	Equipped with full-featured measurement and analysis software	Can be configured upper and lower limits, DI trigger, DO output, offline running
Data characteristics			
	Lux	linearity: <5%	Repeated measurement: <1%FS
	xy(CIE1931)	Accuracy: 0.015 @5500K	Repeated measurement: 0.0005
	uv(CIE1976)	Accuracy: 0.015 @5500K	Repeated measurement: 0.0005
	CCT	Accuracy: 4% @5500K	Repeated measurement: 20K
	RGB	No international standard	Repeated measurement: <1%FS
	DomiWave	Accuracy: 4nm	Repeated measurement: 0.3nm
Optical characteristics	Wavelength range	400-740nm	custom infrared and UV probe
	LUX range	0.05lx-100,000lx	Different models have different ranges
Shell size	Size	M30*88MM	
	Material	Stainless steel	

Electrical parameters - physical picture

PHB2.0-12P connector	Port definitions	Functional description	note
1	B-	RS485/B-	115200,1,8,N
2	A+	RS485/A+	ID=1(Modbus-ASCII)
3	0V	Digital ground	Power cathode
4	Y2	Optocoupler OC gate output	Blue led
5	DC+	DC9-26V+	Power positive
6	Y1	Optocoupler OC gate output	Green led
7	X0	Optocoupler Input	Short DC+ conduction X0
8	Y0	Optocoupler OC gate output	Red led

9	AO2+	Chroma2 analog output 0-5V	Can choose 4-20 ma
10	AO3+	Lux analog output 0-5V	Can choose 4-20 ma
11	AO1+	Chroma1 analog output 0-5V	Can choose 4-20 ma
12	AO-	Analog ground	
the miniUSB interface does not support the port definition function, only supports USB-RS232 protocol, USB_5V power supply			

Switch board port label	Functional description	note
DC+	DC9-26V+	Power positive
VDO+	PNP DO port output voltage(3V-26V+)	The DO port is converted into the positive pole of the power supply for PNP output, and it is not connected for NPN output
0V	Digital ground	Power cathode
DIN0	Optocoupler Input (X0)	DIN0 short DC+ conduction, on-board button, one key learning function
DO0	Optocoupler NPN output Y0(Red led)	Default is NPN optocoupling output, DO0 directly connected to Y0,DO1 directly connected to Y1,DO2 directly connected to Y2, the current is less than 20mA; PNP type output is optional, and the output voltage is determined by the user's external VDO+, The current is extended to 250mA;
DO1	Optocoupler NPN output Y1(Green led)	
DO2	Optocoupler NPN output Y2(Blue led)	
AO2+	Chroma2 analog output 0-5V	Can choose 4-20 ma
AO3+	Lux analog output 0-5V	Can choose 4-20 ma
AO1+	Chroma1 analog output 0-5V	Can choose 4-20 ma
AO-	Analog ground	
TA+	RS485/A+	ID=1(Modbus-ASCII)
RB-	RS485/B-	115200,1,8,N
The miniUSB probe does not support the adapter board		

